

Preserving antibiotics for the future

**Get Smart
About Antibiotics Week**
November 17-23, 2014

Did you know?

1. Antibiotic resistance is one of the world's most pressing public health threats.
2. Antibiotics are the most important tool we have to combat life-threatening bacterial diseases, but antibiotics can have side effects.
3. Antibiotic overuse increases the development of drug-resistant germs.
4. Patients, healthcare providers, hospital administrators, and policy makers must work together to employ effective strategies for improving antibiotic use – ultimately improving medical care and saving lives.

Looking ahead at the problem

- No single strategy can solve the issue of antibiotic resistance; a multi-pronged approach is required.
- There are four core actions that will help fight these deadly infections:
 - Preventing infections and preventing the spread of resistance
 - Tracking resistant bacteria
 - Improving the use of today's antibiotics
 - Promoting the development of new antibiotics and developing new diagnostic tests for resistant bacteria

4 Core Actions to Prevent Antibiotic Resistance

1. Preventing Infections, Preventing The Spread of Resistance
2. Tracking
3. Improving Antibiotic Prescribing/Stewardship
4. Developing New Drugs and Diagnostic Tests

Bacteria will inevitably find ways of resisting the antibiotics we develop, which is why aggressive action is needed now to keep new resistance from developing and to prevent the resistance that already exists from spreading. Combating resistance will take significant effort from clinicians, healthcare facility leaders, policy makers, and the agriculture industry.

To raise awareness and engage stakeholders, CDC recently released Antibiotic Resistance Threats in the United States, 2013, a snapshot of the complex problem of antibiotic resistance today and the potentially catastrophic consequences of inaction. In 2014, the White House announced the Executive Order and the National Strategy to Combat Antibiotic-Resistant Bacteria. These actions provide goals and direction to help the nation contain the spread of resistant bacterial strains, manage existing antibiotics to preserve their effectiveness, and help guarantee a steady pipeline of new, effective antibiotics and diagnostics.

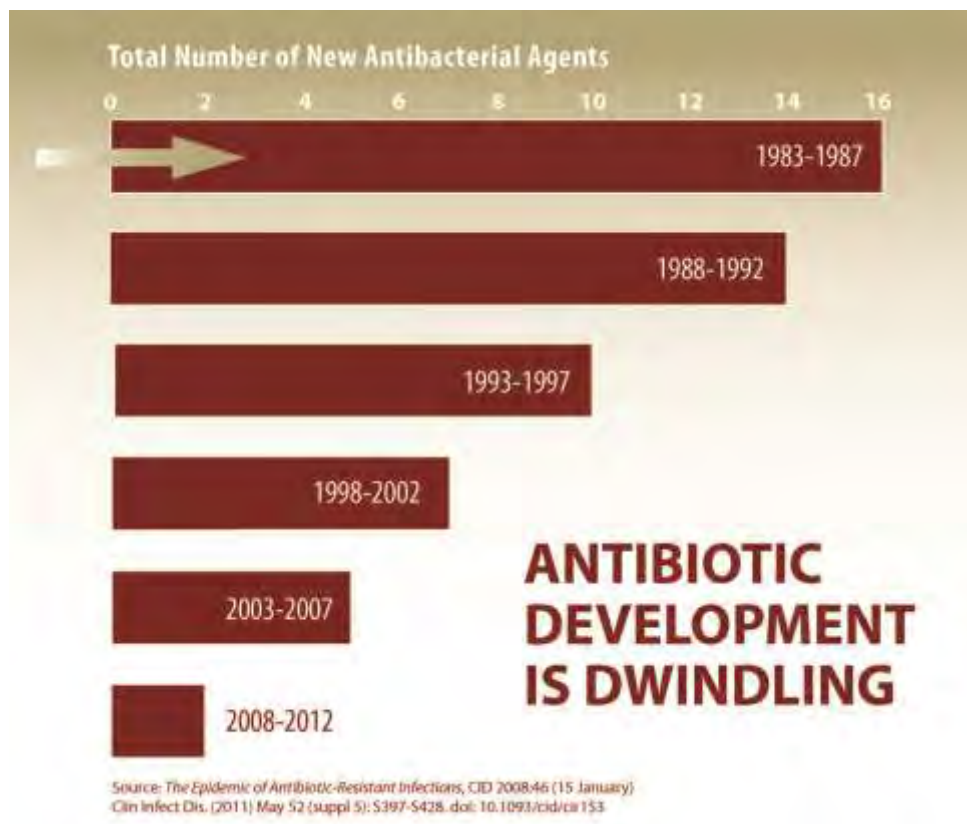
Why we must act now

- The way we use antibiotics today or in one patient directly impacts how effective they will be tomorrow or in another patient; they are a shared resource.
- Antibiotic resistance is not just a problem for the person with the infection. Some resistant bacteria have the potential to spread to others – promoting antibiotic-resistant infections.
- Since it will be many years before new antibiotics are available to treat some resistant infections, we need to improve the use of antibiotics that are currently available.



Changing the way we think about antibiotics for the future

- Antibiotic use is a healthcare-quality issue that impacts patient safety.
- Investments in appropriate antibiotic use will pay off, saving lives and money.
- Healthcare facilities must have support for antibiotic stewardship interventions and programs in order to manage antibiotic use.
- Ensuring the success of antibiotic stewardship programs is a collective effort.
- Resistant organisms will continue to develop, so it is important that we continue to pursue the development of new antibiotics while preserving the ones we have today.



Vaccines as a tool for addressing antibiotic resistance

- Developing new vaccines can decrease rates of antibiotic-resistant infections. The first pneumococcal conjugate vaccine (PCV7) was licensed in the U.S. for use in infants and children in 2000. The newest pneumococcal conjugate vaccine (PCV13) replaced PCV7 in 2010.
- PCV13 provides an opportunity to prevent even more antibiotic-resistant infections of pneumococcal disease since it protects against six additional strains of pneumococcus bacteria.
- After introduction of PCV13 (2010-2012), cases of pneumococcal disease resistant to penicillin decreased by 87% compared to the pre-PCV13 period.



Centers for Disease Control and Prevention

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